## **ABSTRACT**

[0052]

A system for reassembling asynchronous transfer mode (ATM) data in real time is disclosed. In one embodiment, the system for reassembling ATM data in real time comprises a circular buffer for storing ATM data, the ATM data comprising information divided into cells, and a plurality of parallel processing elements configured to analyze the ATM cells and determine a cell type, wherein ATM adaptation layer (AAL) 2 cells and AAL 5 cells are reassembled in real-time.